Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 10/29/13 at 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will work with other technical teams. DOSS notes and advice can be found at: http://www.westcoast.fisheries.noaa.gov/central_valley/water_operations/doss.html.

DWR: Mike Ford, Edmund Yu, Kevin Reece, Andy Chu, Farida Islam
FWS: Craig Anderson, Roger Guinee
NMFS: Barbara Rocco, Jeff Stuart, Barb Byrne, Garwin Yip
Reclamation: Russ Yaworsky, Josh Israel
DFW: Chris McKibbin, Colin Purdy
SWRCB: Scott Ligare
EPA, USGS: not present

Agenda
1. Fish monitoring
2. Current operations
3. Check-in on RPA actions
4. Update on preparation for operations annual review
5. DOSS advice

Fish Monitoring: The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See also: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.

Note: DAT data (tables) had not yet been formally distributed by FWS by the time of the DOSS meeting, but DWR had received the data to generate the salmonid monitoring charts and was able to provide a partial report.

Location	Chipps Is. Midwater Trawl	Sacramento Trawls	Mossdale Kodiak Trawl	GCID	Knights Landing RST	Tisdale RST	Beach Seines
Sample Date	10/22–28			10/22–28	10/22–27	10/22–28	
Total Catch	**1**			**321**	**0**	**2**	
FR				2			
WR				309		2	
SR				3			
LFR	1			7			
Ad-Clipped Chinook							
DS							
Splittail							
Longfin							
SH (ad-clip)							
SH (wild)							

W. Temp. (avg. °F)				61.0	61.0	57.7	
Flows (avg. cfs)					3710	4244	
Turbidity (avg. NTU)				1.64	2.4	7.0	
WR/LFR Avg. CPUE				1.99			
FR/SR Avg. CPUE							

CPUE = catch per unit of effort; ACT = acoustic tag; GCIC = Glenn–Colusa Irrigation District; RST = rotary screw trap
[1]Note that FTU is used at Knight's Landing in place of NTU

Catch of juvenile green sturgeon in the Sacramento rotary screw traps (RSTs): Byrne reported on the juvenile green sturgeon catch at the RSTs at Red Bluff Diversion Dam (RBDD) during brood-year 2013 per the information provided by e-mail from Josh Gruber (FWS). There were 443 juvenile green sturgeon seen in brood-year 2013; 288 were seen in brood-year 2012. Gruber noted that RST catch numbers for brood-years 2013 and 2012 are not standardized for sampling effort and might not reflect the actual abundance in those 2 years. The source for the RST catch information is: http://www.fws.gov/redbluff/rbdd_greensturgeon.aspx

Two green sturgeon have been captured at the Glenn–Colusa Irrigation District (GCID): one each on June 20 and 24. It was noted that green sturgeon captures at GCID were high in the late 1990s and early 2000s compared with the numbers at RBDD. Gruber sent Byrne the complete reports on green sturgeon sampling for 2011 and 2012. Anyone who is interested in these reports can contact Byrne.

GCID: There was a break in a GCID canal last week. Because pumping stopped during the repair work, flows in the mainstem Sacramento River immediately downstream of GCID increased by approximately 2,000 cfs. Repairs were completed within approximately 6–8 hours.

Tisdale: RSTs are scheduled to fish 7 days/week; 1.2–2.0 cone rotations/minute. Last week, the traps were shifted to a position farther out in the river.

Knights Landing: Traps are fishing and being checked 7 days/week; 1.2–1.5 rotations/minute.

There was a question about whether RST data could be used to indicate something beyond presence/absence through methods such as

- efficiency tests that would allow expansion of the raw catch data to a more quantitative estimate of fish passage by that RST location,
- standard operating procedures for trap revolutions, or
- adjustments to the CPUE to account for operational issues such as leaves coating the cones (as reported at GCID this past week).

McKibbin (DFW) noted that DFW evaluates debris at the RSTs on a daily basis and performs trap-efficiency tests based on catch and availability of fall-run-sized juvenile Chinook salmon. These data are analyzed and reported in DFW's annual report. He will check with management on whether the report for 2012 has been finalized and can be sent to DOSS.

In the meantime, if anyone has any documents related to efficiency testing and protocols for RSTs in the Sacramento River, please send them to Byrne and Rocco.

RPA implementation: None of the flow or temperature triggers in Action IV.1.1, or catch index triggers in Action IV.1.2, have been exceeded since 10/1.

Fish salvage: Byrne shared the salvage report e-mailed by Fujimura (DFW) from 10/1 through 10/27. No Chinook salmon, steelhead/rainbow trout, or green sturgeon were salvaged at the SWP and CVP fish collection facilities.

Operations (10/29/13)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	1,000	Jones Pumping Plant	800 (will pump 1,800 on 10/30)
Reservoir Releases (cfs)			
Feather - Oroville	1,750 (will remain through November. The minimum is 1,250; therefore, if it remains dry, releases might be decreased)	American - Nimbus	1,300 (will remain through December)
		Sacramento - Keswick	6,250 (will reduce by 200/day beginning 11/1 to get to 4,250. Will reassess at that time to reduce further if possible)
		Stanislaus - Goodwin	700 (will continue to reduce by ~200/day for several days to get to 350 by 10/31)
Reservoir Storage (in TAF, % of capacity)			
San Luis (SWP)	184	San Luis (CVP)	255 (26)
Oroville	1,537	Shasta	1,757
New Melones		Folsom	299
Delta Operations			
DCC	Closed for Rio Vista flow standard. Will open on 10/31 (morning) through weekend and close again on 11/4 (morning).	Sacramento River at Freeport (cfs)	7,697
Outflow Index (cfs)	~6,900	San Joaquin River (cfs) at Vernalis	2,671(reducing from cuts at Goodwin)
Total Delta Inflow (cfs)	10,727	OMR (daily) (cfs)	
Water Temperature (°F)		OMR 5-day avg (cfs)	

X2 (km)	81 (upstream of Collinsville)	OMR 14-day avg (cfs)	
E/I (%)	21.4 (3-d avg)		

Weather: Possible precipitation around mid-November; most likely nothing or not much until then.

Water flows/quality: Strong winds were reflected by a drop of ~1,000 cfs in 1 day on the Sacramento River at Freeport. Freeport will definitely feel the tidal effect. Outflow is controlling export operations; the Rio Vista flow standard is still controlling DCC operations.

RPA actions:

- IV.1.1: No alerts have been tripped
- IV.1.2: No triggers for DCC gate closures have been tripped
- IV.3: Will go into effect on 11/1; at that time DOSS will begin tracking loss densities at the fish collection facilities.

Smelt Working Group (SWG): Has not yet met. Previous SWG meeting notes are available at: http://www.fws.gov/sfbaydelta/cvp-swp/smelt_working_group.cfm. There was a question about the midwater trawl survey and whether it is now in place. Yu mentioned that DFW representatives will be on the DAT call on 10/31 to provide an update on the survey that should have started in September. Byrne will provide the information to DOSS on the 11/5 call.

DOSS advice to WOMT and NMFS: None.

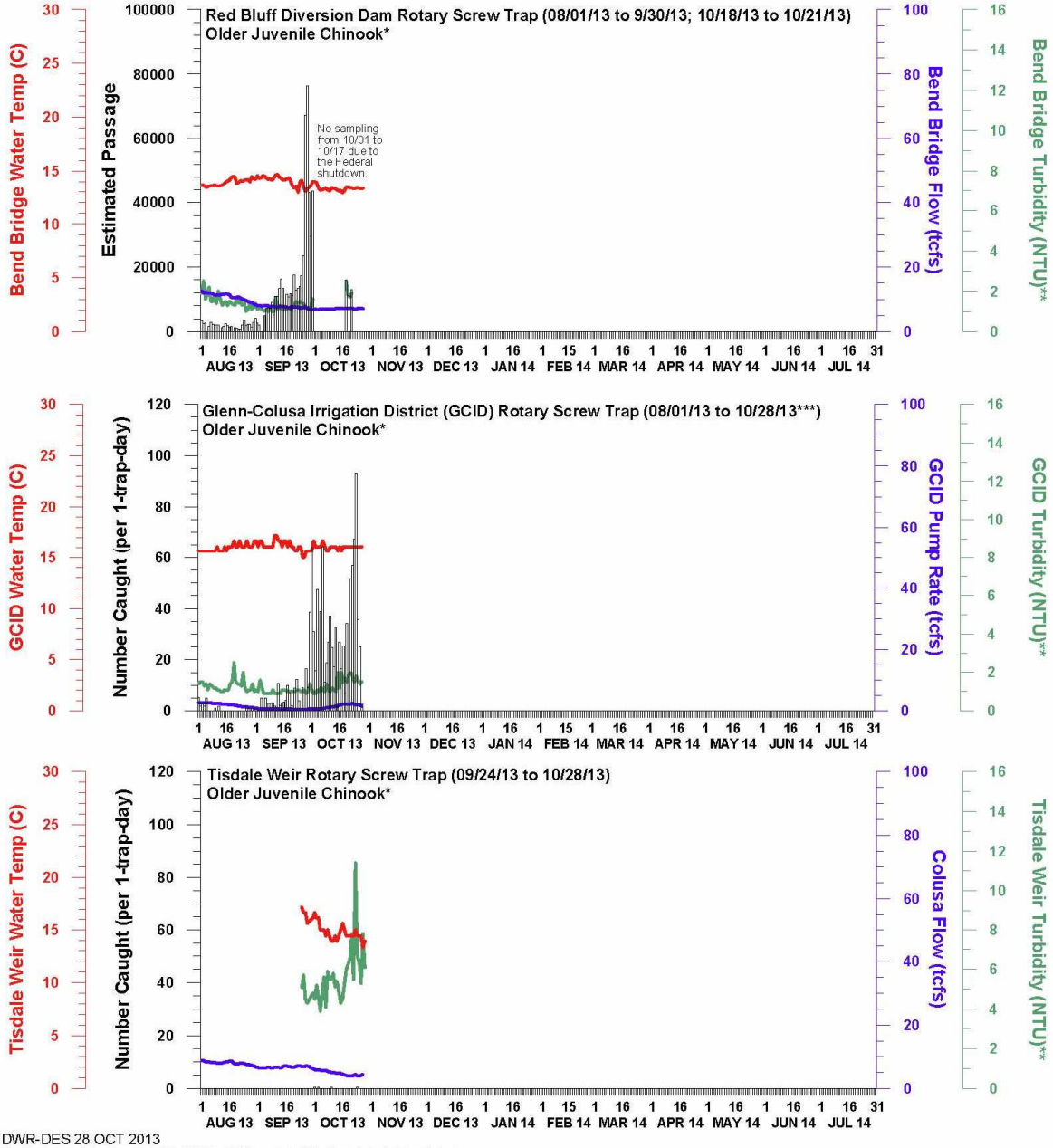
Annual review: Yip (NMFS) reported that the "dry runs" for the annual review will be done tomorrow (10/30) in the Delta Room at NMFS' office. WebEx and a conference line have been reserved and Traci Michel (Reclamation) will provide information on both. The current schedule is:

- 9–10 a.m.: Israel (Reclamation) and Yu will present the information on Term & Condition 2a;
- 10–11 a.m.: Thuy Washburn (Reclamation) will present on the Sacramento River Temperature Task Group (SRTTG) operations; and
- 3–4 p.m.: Brycen Swart (NMFS) will present on SRTTG fisheries.

Next Meeting: The next DOSS conference call will be on 11/5/13 at 9:00 a.m.

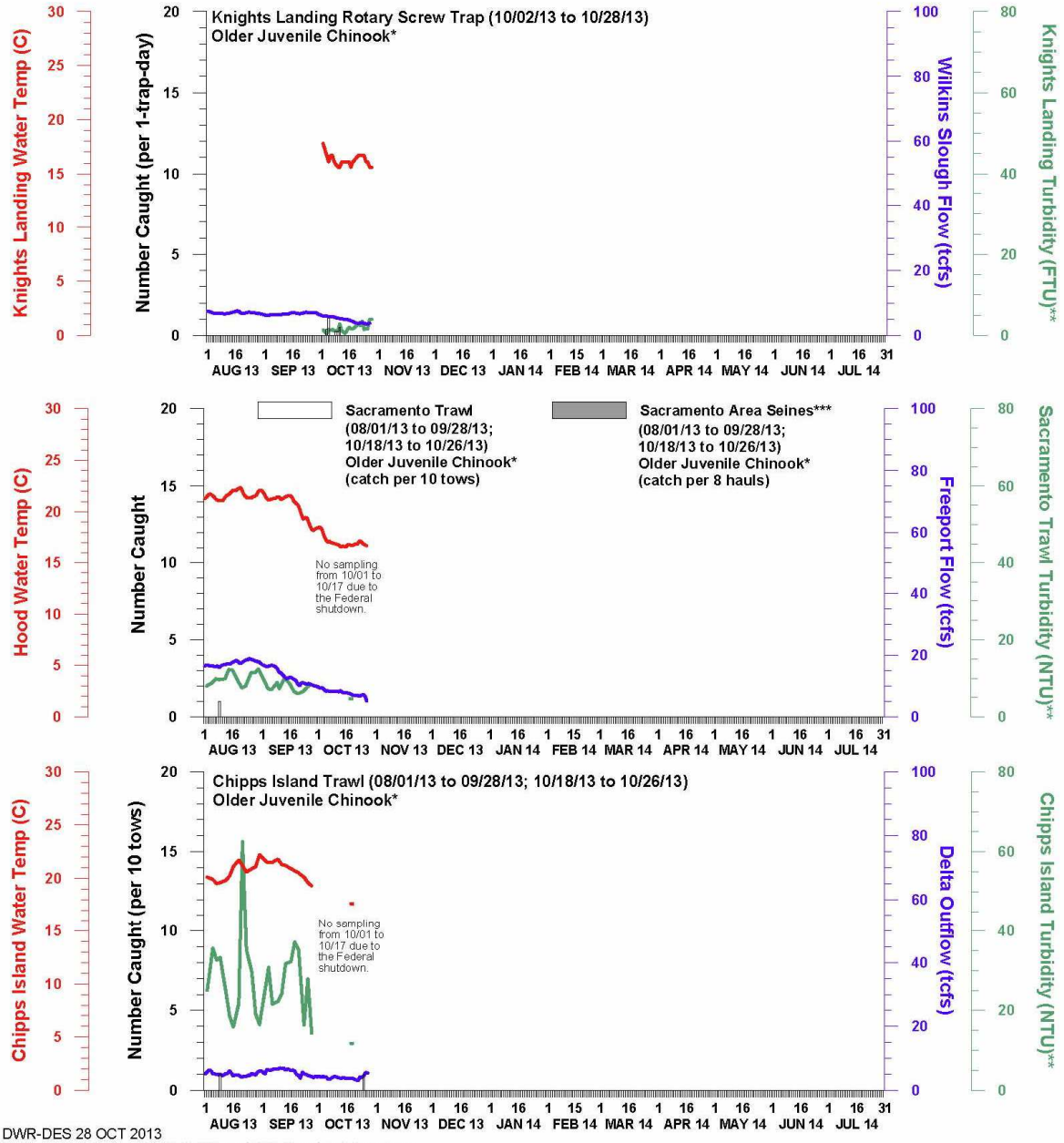
Below are graphs provided by DWR for Chinook salmon and steelhead observed at monitoring locations in the Sacramento and San Joaquin rivers and Delta. Also included is green sturgeon catch at RBDD graph that was provided by FWS. For additional graphs, please visit the DWR website at: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER



DWR-DES 28 OCT 2013
Preliminary data from DFW, FWS, GCID, and CDEC; subject to revision.
*Older juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher model) for which a race is assigned on a given sampling date.
**Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured.
***GCID: Five older juveniles caught on 9/25, 9 older juveniles caught on 9/27, and 57 older juveniles caught on 10/5. However, catch could not be standardized to 1-trap day since hours fished could not be calculated due to problems with the cone clicker. As a result, data are not presented on the graph.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE LOWER SACRAMENTO RIVER AND CHIPPS ISLAND



DWR-DES 28 OCT 2013

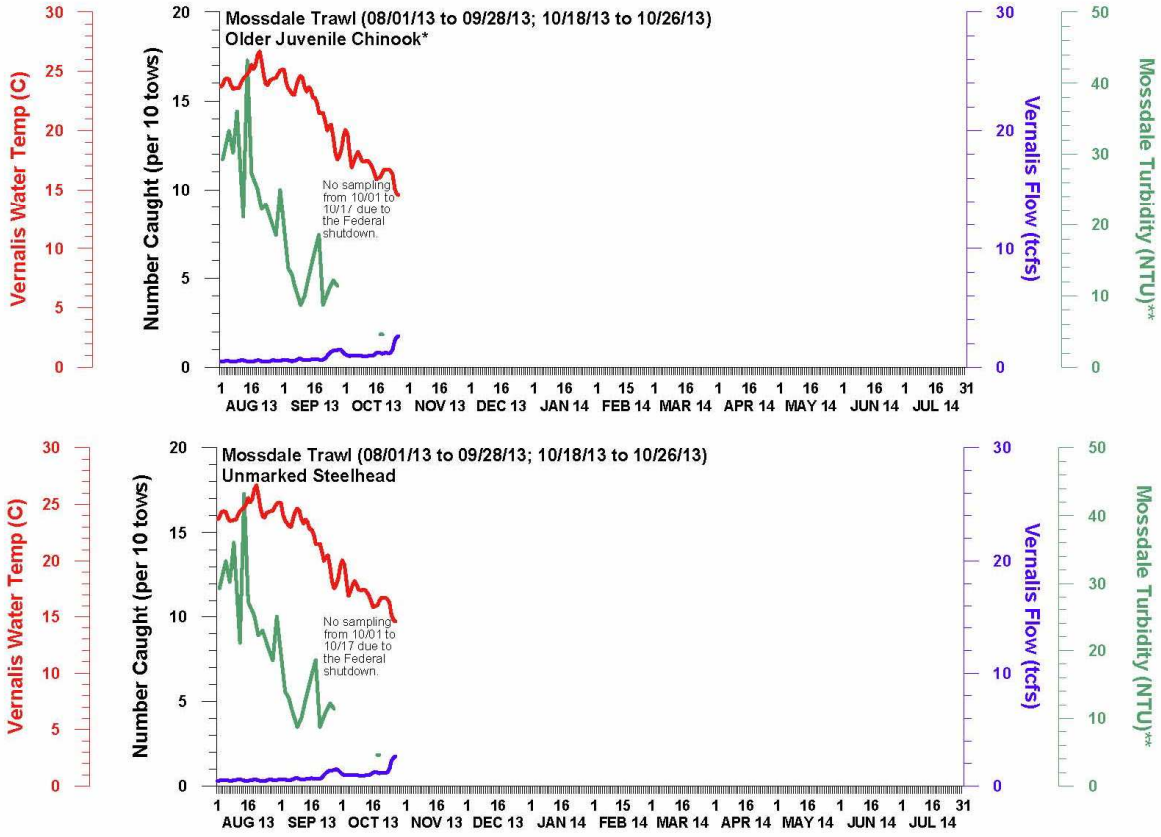
Preliminary data from DFW, FWS, and CDEC; subject to revision.

*Older Juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher Model) for which a race is assigned on a given sampling date.

**Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured. Knights Landing turbidity measured in FTU, which should be roughly equivalent to NTU.

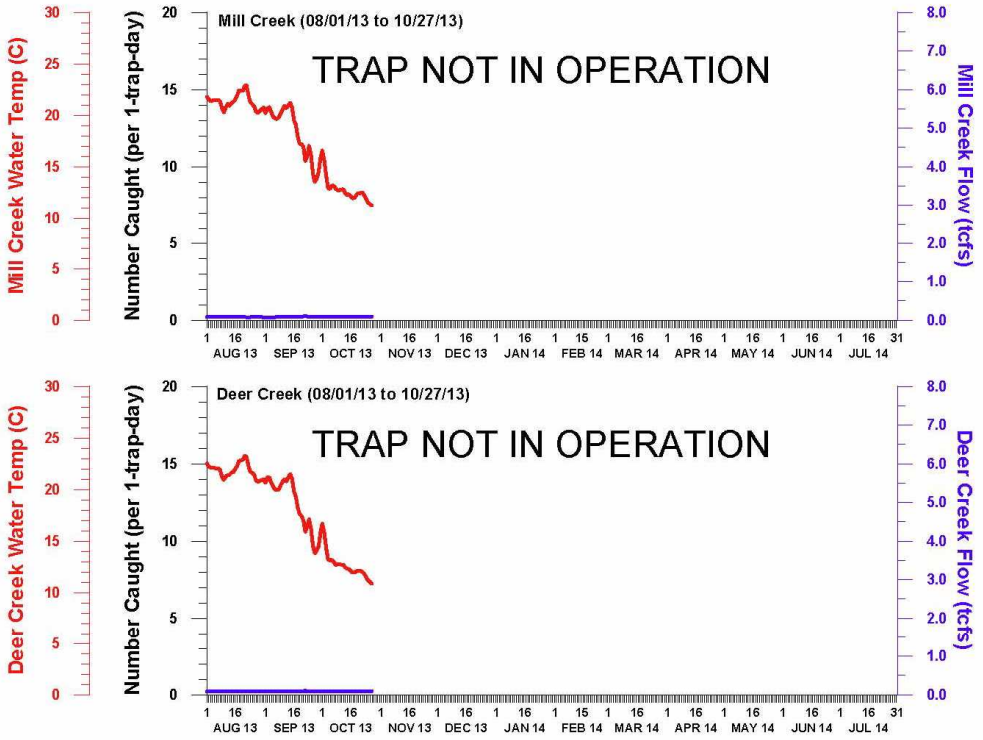
***Sacramento area seine route consists of the following seine sites: Verona, Elkhorn, Sand Cove, Discovery Park, American River, Miller Park, Sherwood Harbor, and Garcia Bend. Bars are stacked if Chinook caught from the trawl and seines are from the same day.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK AND STEELHEAD MEASURED IN THE SAN JOAQUIN RIVER



DWR-DES 28 OCT 2013
Preliminary data from FWS and CDEC; subject to revision.
*Older juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher model) for which a race is assigned on a given sampling date.
**Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured.

WATER TEMPERATURE AND FLOW MEASURED AT MILL AND DEER CREEK



DWR-DES 28 OCT 2013
Preliminary data from CDEC; subject to revision.

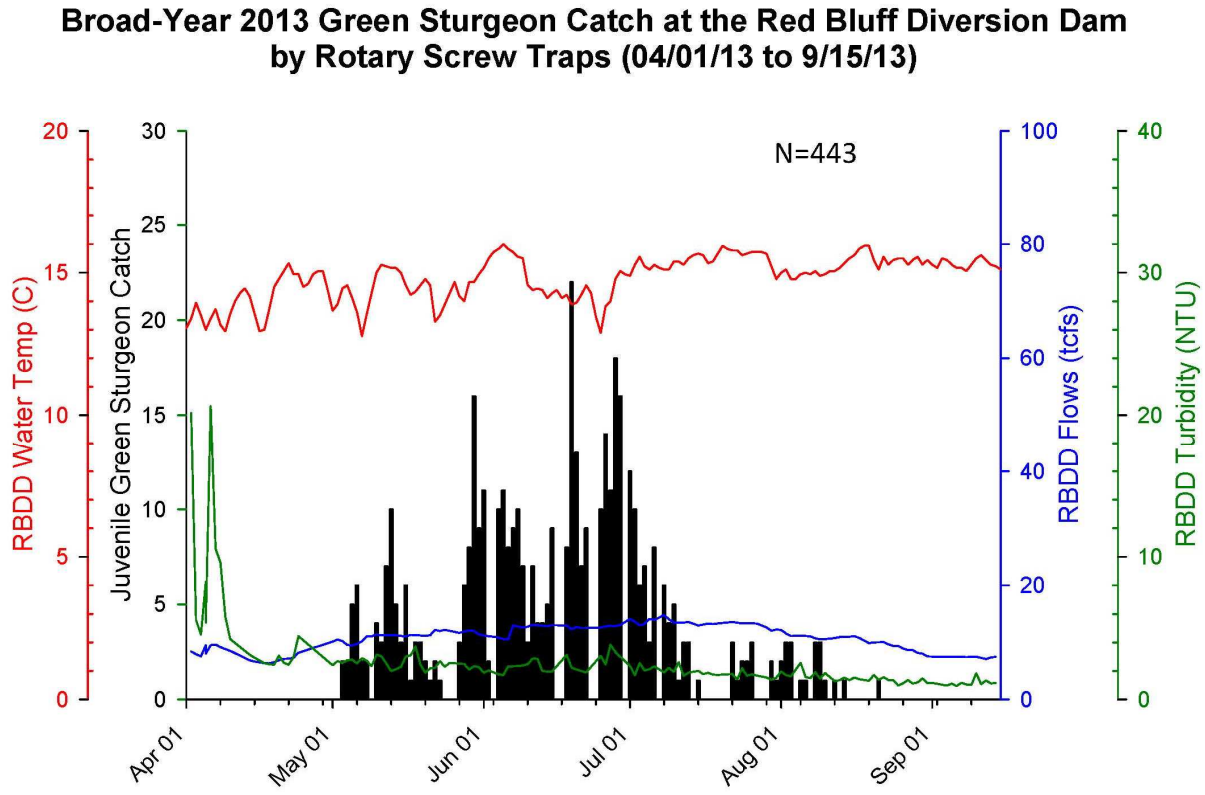


Figure 1. Juvenile Green Sturgeon (N=443) caught below the Red Bluff Diversion Dam (RBDD) via rotary screw trap for broad year 2013. RBDD flows (tcfs) are calculated by subtracting daily water diversions from the Red Bluff Pumping Plant from the daily observed flow at the Bend Bridge gauging station. Turbidity was collected on site via grab samples. RBDD water temperature (C) was obtained from the RBDD gauging station. Data is not standardized for effort; catch data derived from three rotary screw traps.